



## FEDERAL COMMUNICATIONS COMMISSION

### 47 CFR Part 90

[WP Docket No. 07-100; FCC 23-3; FR ID 126041]

### Improving Public Safety Communications in the 4.9 GHz Band

**AGENCY:** Federal Communications Commission.

**ACTION:** Proposed rule.

**SUMMARY:** In this document, the Federal Communications Commission (FCC) seeks comment on the details of implementing a new leasing model for the 4.9 GHz (4940-4990 MHz) band to achieve its goals of allowing robust locally controlled public safety operations while ensuring consistent, nationwide rules that promote overall spectral efficiency, foster innovation, and drive down equipment costs.

**DATES:** Interested parties may file comments on or before **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**; and reply comments on or before **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

**ADDRESSES:** Federal Communications Commission, 45 L St NE, Washington, DC 20554.

You may submit comments, identified by WP Docket No. 07-100, by any of the following methods:

- **Electronic Filers:** Comments may be filed electronically using the internet by accessing the ECFS: <http://apps.fcc.gov/ecfs/>.
- **Paper Filers:** Parties who choose to file by paper must file an original and one copy of each filing.
  - Filings can be sent by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.
  - Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9050 Junction Drive, Annapolis Junction, MD 20701. U.S. Postal Service first-class, Express, and Priority mail must be addressed to 45 L Street NE, Washington, DC 20554.
- Effective March 19, 2020, and until further notice, the Commission no longer accepts any hand or messenger delivered filings. This is a temporary measure taken to help protect the health and

safety of individuals, and to mitigate the transmission of COVID-19. See FCC Announces Closure of FCC Headquarters Open Window and Change in Hand-Delivery Policy, Public Notice, DA 20-304 (March 19, 2020). <https://www.fcc.gov/document/fcc-closes-headquarters-open-window-and-changes-hand-delivery-policy> .

People with Disabilities: To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an email to [fcc504@fcc.gov](mailto:fcc504@fcc.gov) or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (TTY).

**FOR FURTHER INFORMATION CONTACT:** For additional information on this proceeding, contact Jon Markman of the Wireless Telecommunications Bureau, Mobility Division, at (202) 418-7090 or [Jonathan.Markman@fcc.gov](mailto:Jonathan.Markman@fcc.gov) or Brian Marenco of the Public Safety and Homeland Security Bureau at (202) 418-0838 or [Brian.Marenco@fcc.gov](mailto:Brian.Marenco@fcc.gov).

**SUPPLEMENTARY INFORMATION:** This is a summary of Commission's Ninth Further Notice in WP Docket No. 07-100; FCC 23-3, adopted and released on January 18, 2023. The full text of this document is available for public inspection online at <https://docs.fcc.gov/public/attachments/FCC-23-3A1.pdf>.

1. In this Ninth Further Notice, the Commission seeks comment on a range of questions related to the implementation of its new Band Manager model for the 4.9 GHz band adopted in the Seventh Report and Order. This model will preserve the essentially public safety nature of the band while decreasing access costs and expanding use to a variety of primary public safety and secondary non-public safety operations.
2. First, it seeks comment on the Band Manager's efforts in coordinating public safety operations, in particular mitigating harmful interference and modernizing operations. Next, it seeks comment on the Band Manager's role in facilitating leasing to non-public safety users; how to enable such leasing, how to manage the revenues that arise from it, and how to ensure preemption rights for public safety operations. It also seeks comment on the implementation of our committee-based selection process for the Band Manager, which mirrors the approach the Commission has taken for selecting clearinghouses and

transition coordinators in a number of other bands. Finally, it seeks comment on oversight of the Band Manager and on other issues related to the implementation of the Band Manager model.

3. In particular, the Commission in this Ninth Further Notice builds off the record before it and seeks comment on specific criteria for protecting public safety licensees operating in the band from what it terms “harmful interference at 4.9 GHz.” It seeks comment on what role the Band Manager should play, as part of its frequency coordination duties, in mediating or deciding disputes if parties disagree about existing or proposed operations. It also seeks further comment on whether the Band Manager should be able to engage with any broadband network providers (public safety and/or commercial) to pursue opportunities for integrating operations in the 4.9 GHz band with broadband networks used by public safety in other spectrum bands and how best to incorporate the latest commercially available technologies, including 5G, into the 4.9 GHz band.

4. Furthermore, the Commission in this Ninth Further Notice seeks input on two possible means of enabling Band Manager-coordinated non-public safety leasing, as well as general considerations for creating an effective leased access model for the band, in particular, the need to ensure non-discriminatory treatment of potential lessees. Under either model, the Commission seeks to ensure that all potentially affected licensees are given the opportunity to consent to the leasing arrangements. It also proposes that the Band Manager be funded, at least partially, by leasing revenues, which will enable the Band Manager to be fully independent and equipped to engage in the kind of complex spectrum analysis needed to enable this leasing model. The Commission also seeks comment on how its rules should treat compensation to licensees, either directly from non-public safety operators or from the Band Manager.

5. The Commission in this Ninth Further Notice also seeks comment on how to ensure preemption rights for public safety licensees over non-public safety users in emergency circumstances. It also seeks comment on the nature of a selection committee for the Band Manager and tentatively concludes that the selection committee should include representatives from the public safety community.

6. The Commission also seeks comment in this Ninth Further Notice on the role it should play in overseeing the Band Manager’s decisions, on how to address future licensing of the band, and on whether

the new Band Manager framework presents new opportunities for unmanned aircraft systems (UAS) in the band.

7. Finally, the Commission, as part of its continuing effort to advance digital equity for all, including people of color, persons with disabilities, persons who live in rural or Tribal areas, and others who are or have been historically underserved, marginalized, or adversely affected by persistent poverty or inequality, invites comment on any equity-related considerations and benefits (if any) that may be associated with the proposals and issues discussed in this Ninth Further Notice. Specifically, it seeks comment on how our proposals may promote or inhibit advances in diversity, equity, inclusion, and accessibility, as well the scope of the Commission's relevant legal authority.

### **Procedural Matters**

#### **Paperwork Reduction Act**

8. This Ninth Further Notice may contain new or modified information collection(s) subject to the Paperwork Reduction Act of 1995. If the Commission adopts any new or modified information collection requirements, they will be submitted to the Office of Management and Budget (OMB) for review under section 3507(d) of the PRA. OMB, the general public, and other federal agencies are invited to comment on the new or modified information collection requirements contained in this proceeding. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, we seek specific comment on how we might "further reduce the information collection burden for small business concerns with fewer than 25 employees."

#### **Regulatory Flexibility Act**

9. The Regulatory Flexibility Act of 1980, as amended (RFA), requires that an agency prepare a regulatory flexibility analysis for notice and comment rulemakings, unless the agency certifies that "the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities." Accordingly, the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA)

concerning potential rule and policy changes contained in the Ninth Further Notice. The IRFA is contained in Appendix D of the Ninth Further Notice.

### **Initial Regulatory Flexibility Analysis**

10. As required by the Regulatory Flexibility Act of 1980, as amended (RFA), the Commission has prepared this Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on a substantial number of small entities by the policies and rules proposed in the Ninth Further Notice of Proposed Rulemaking (Ninth Further Notice). Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments as specified in the Ninth Further Notice. The Commission will send a copy of the Ninth Further Notice, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA). In addition, the Ninth Further Notice and IRFA (or summaries thereof) will be published in the Federal Register.

#### **A. Need for, and Objectives of, the Proposed Rules**

11. Having decided in the Seventh Report and Order that a nationwide Band Manager for the 4.9 GHz band is the best option for moving forward on a comprehensive nationwide, coordinated approach to the band, in the Ninth Further Notice the Commission seeks comment on the tentative conclusions, proposals and inquiries we put forth addressing the rights and responsibilities of the nationwide Band Manager regarding public safety and non-public safety operations, selection of the Band Manager, Commission oversight of the Band Manager and other considerations involving licensing and use of the band. More specifically, we seek comment in the Ninth Further Notice on an interference criteria for the Band Manager to apply as part of its frequency coordination duties. We also seek comment on the Band Manager mediating disputes, evaluating potential integration of the 4.9 GHz band with broadband networks used by public safety in other frequency bands, and facilitating the leasing of unused spectrum rights to non-public safety entities which includes two possible leasing models that could be implemented. We further seek comment on our proposals regarding the applicable rules for leasing arrangements, the required consents for non-public safety use of the band, funding of the Band Manager primarily by leasing revenues, allowing the Band Manager to charge licensees and applicants reasonable

rates for its coordination services and the eligibility criteria to be used by the selection committee in its evaluation process for Band Manager applicants.

12. Finally, we seek comment on ensuring preemption rights for public safety licensees over non-public safety users, qualifications for any entity seeking the Band Manager position, a selection committee to select the Band Manager, the role of the Commission in overseeing the Band Manager as well as the contents of annual reports from the Band Manager, on future public safety licensing of the band and on aeronautical mobile use of the band.

13. In seeking comment on these issues, we believe the Commission can implement a nationwide framework for the 4.9 GHz band which ensures public safety operations continue to be prioritized while opening the band to additional users which will facilitate increased use of the band, encourage a more robust market for equipment and greater innovation, and at the same time protect public safety users from harmful interference.

## **B. Legal Basis**

14. The proposed action is authorized pursuant to sections 1, 4(i), 4(j), 4(o), 301, 303(b), 303(g), 303(r), 316, 332, and 403 of the Communications Act of 1934, as amended, 47 U.S.C. 151, 154(i), 154(j), 154(o), 301, 303(b), 303(g), 303(r), 316, 332, and 403.

## **C. Description and Estimate of the Number of Small Entities to Which the Proposed Rules Will Apply**

15. The RFA directs agencies to provide a description of, and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules and policies, if adopted. The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.” In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act. A “small business concern” is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.

16. Small Businesses, Small Organizations, Small Governmental Jurisdictions. Our actions, over time, may affect small entities that are not easily categorized at present. We therefore describe here, at the outset, three broad groups of small entities that could be directly affected herein. First, while there

are industry specific size standards for small businesses that are used in the regulatory flexibility analysis, according to data from the Small Business Administration's (SBA) Office of Advocacy, in general a small business is an independent business having fewer than 500 employees. These types of small businesses represent 99.9% of all businesses in the United States, which translates to 32.5 million businesses.

17. Next, the type of small entity described as a "small organization" is generally "any not-for-profit enterprise which is independently owned and operated and is not dominant in its field." The Internal Revenue Service (IRS) uses a revenue benchmark of \$50,000 or less to delineate its annual electronic filing requirements for small exempt organizations. Nationwide, for tax year 2020, there were approximately 447,689 small exempt organizations in the U.S. reporting revenues of \$50,000 or less according to the registration and tax data for exempt organizations available from the IRS.

18. Finally, the small entity described as a "small governmental jurisdiction" is defined generally as "governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand." U.S. Census Bureau data from the 2017 Census of Governments indicate that there were 90,075 local governmental jurisdictions consisting of general purpose governments and special purpose governments in the United States. Of this number there were 36,931 general purpose governments (county, municipal and town or township) with populations of less than 50,000 and 12,040 special purpose governments - independent school districts with enrollment populations of less than 50,000. Accordingly, based on the 2017 U.S. Census of Governments data, we estimate that at least 48,971 entities fall into the category of "small governmental jurisdictions."

19. Private Land Mobile Radio Licensees. Private land mobile radio (PLMR) systems serve an essential role in a vast range of industrial, business, land transportation, and public safety activities. Companies of all sizes operating in all U.S. business categories use these radios. Wireless Telecommunications Carriers (except Satellite) which encompasses business entities engaged in radiotelephone communications, is the closest industry with an SBA small business size standard applicable to these services. The SBA small size standard for this industry classifies a business as small if it has 1,500 or fewer employees. U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year. Of this number, 2,837 firms employed fewer than 250

employees. Thus, under the SBA size standard, the Commission estimates licensees in this industry can be considered small.

20. Based on Commission data as of December 14, 2021, there are approximately 387,370 active PLMR licenses. Active PLMR licenses include 3,577 licenses in the 4.9 GHz band; 19,011 licenses in the 800 MHz band; and 2,716 licenses in the 900 MHz band. Since the Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard. Nevertheless, the Commission believes that a substantial number of PLMR licensees are small entities.

21. Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing. This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by these establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment. The SBA small business size standard for this industry classifies businesses having 1,250 employees or less as small. U.S. Census Bureau data for 2017 show that there were 656 firms in this industry that operated for the entire year. Of this number, 624 firms had fewer than 250 employees. Thus, under the SBA size standard, the majority of firms in this industry can be considered small.

22. Wireless Telecommunications Carriers (except Satellite). This industry comprises establishments engaged in operating and maintaining switching and transmission facilities to provide communications via the airwaves. Establishments in this industry have spectrum licenses and provide services using that spectrum, such as cellular services, paging services, wireless internet access, and wireless video services. The SBA size standard for this industry classifies a business as small if it has 1,500 or fewer employees. U.S. Census Bureau data for 2017 show that there were 2,893 firms in this industry that operated for the entire year. Of that number, 2,837 firms employed fewer than 250 employees. Additionally, based on Commission data in the 2021 Universal Service Monitoring Report, as of December 31, 2020, there were 797 providers that reported they were engaged in the provision of wireless services. Of these providers,



the Commission estimates that 715 providers have 1,500 or fewer employees. Consequently, using the SBA's small business size standard, most of these providers can be considered small entities.

**D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities**

23. The Ninth Further Notice may impose new or additional reporting or recordkeeping and/or other compliance obligations on small entities, if adopted. Based on Commission proposals in the Ninth Further Notice, small and other entities are likely to be subject to the requirement that all lease arrangements between public safety and non-public safety entities in the 4.9 GHz band comply with our secondary markets rules, if our proposal is adopted. Small and other entities are also likely to be subject to compliance with our proposed requirement that all relevant public safety licensees must consent to non-public safety operator use, if adopted.

24. We also seek comment on what role, if any, public safety licensees should have in reviewing and approving lease agreements being negotiated by the Band Manager. In particular, we seek comment on the benefits and costs of different models of licensee involvement in the leasing process. Further, we seek comment whether the Commission should permit the Band Manager to limit the categories of entities eligible for leased access, or whether such limitations would be contrary to the Commission's goals of ensuring fair access and efficient use of spectrum. The resolution of each of these matters may result in additional compliance obligations for small and other entities operating in the 4.9 GHz band.

25. In assessing the cost of compliance for small entities, at this time the Commission is not in a position to determine whether, if adopted, the proposals and matters upon which we seek comment will require small entities to hire professionals to comply and cannot quantify the cost of compliance with any of the potential rule changes that may be adopted. We expect the information we received in comments including where requested, cost and benefit analyses, to help the Commission identify and evaluate relevant compliance matters for small entities, including compliance costs and other burdens that may result from the proposals and inquiries we make in the Ninth Further Notice.

**E. Steps Taken to Minimize the Significant Economic Impact on Small Entities, and Significant**

## **Alternatives Considered**

26. The RFA requires an agency to describe any significant, specifically small business, alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): “(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for such small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities.”

27. Parties in the proceeding uniformly supported the goal of protecting current and future public safety licensees from interference but differ on how to define interference and which interference protection approach is most appropriate. Therefore, rather than imposing a standard on its own which could adversely impact small entities, in the Ninth Further Notice the Commission seeks further comment on specific criteria for protecting public safety licensees operating in the band from interference. Based on comments, we considered and seek comment on these alternative approaches, the threshold degradation approach of TIA-10, a propagation modeling approach used by part 90 frequency coordination for TDMA systems operating in the VHF band or contour overlap analysis as the basis for determining interference to public safety licensees operating in the 4.9 GHz band. In each case, we seek comment on whether the interference protection criteria would strike the right balance between allowing robust use of the band while protecting critical public safety communications. Further, in the Ninth Further Notice we invite the submission of other approaches and proposals with cost and benefit analyses to establish protection for public safety licensees operating in the 4.9 GHz band.

28. In the Ninth Further Notice, we also seek comment on ways to enable the Band Manager to facilitate the leasing of unused spectrum rights to non-public safety entities. We propose that all relevant public safety licensees would be required to consent to this arrangement but considered and seek comment on alternatives such as whether we should have exceptions to this general requirement and allow leasing in the absence of a given licensee’s consent, for example after a period of non-responsiveness or if the licensee has conditioned its consent in a manner which violates our rules on

compensation. Or whether we should have an exception for lack of consent if, we require certain licensees whose license area does not overlap with the lease area to consent.

29. To safeguard small and other entities from discriminatory treatment, we seek comment in the Ninth Further Notice on what rules should be imposed on the Band Manager to ensure it administers leasing in a non-discriminatory manner. Our inquiry for non-discriminatory leasing rules explores specific lessees as well as the types of lessees and the nature of the operations they will conduct with the 4.9 GHz band. Finally, while we propose that the Band Manager fund itself from leasing revenue, to minimize the impact for small and other entities we considered and seek comment on whether there are any requirements we should put in place as to those fees, whether we should limit the fees charged by the Band Manager to public safety licensees and applicants, whether there are other funding sources for the Band Manager that our rules should contemplate, and how to approach revenues exceeding the Band Manager's costs for its services.

30. The Commission is hopeful that the comments it receives will specifically address matters impacting small entities and include data and analyses relating to these matters. Further, while the Commission believes the rules that are eventually adopted in this proceeding should benefit small entities, whether public safety licensees seeking interference protection in the band or non-public safety entities seeking access to valuable spectrum, the Commission expects to more fully consider the economic impact and alternatives for small entities following the review of comments filed in response to the Ninth Further Notice. The Commission's evaluation of this information will shape the final alternatives it considers, the final conclusions it reaches, and any final actions it ultimately takes in this proceeding to minimize any significant economic impact that may occur on small entities.

**F. Federal Rules that May Duplicate, Overlap, or Conflict with the Proposed Rules**

31. None.

Federal Communications Commission.

**Katura Jackson,**

Federal Register Liaison Officer.

